

1+2/2015

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REVIEW

Land degradation neutrality under the SDGs: National and international implementation of the land degradation neutral world target

Elizabeth Dooley, Ennid Roberts and Stephanie Wunder

Perspectives and actions to improve water quality in European Union Member States

Giuseppe Sgorbati and Nicoletta Dotti

Enforcement of the EU ETS in the Member States

Jonathan Verschuuren and Floor Fleurke

Access to the transposition of EU environmental law by Member States: Only if no infringement proceedings initiated

Anaïs Berthier

Recent Developments

Investor-to-state dispute settlement mechanisms: Five new questions and one old problem

Innovations for sustainability: The perception of chances and risks (Conference report)

Governing environmental impact assessment in Turkey

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Editorial

On 25 September 2015, in New York, 193 Heads of State and Government adopted a resolution entitled ‘Transforming our world: the 2030 Agenda for Sustainable Development’ in the United Nations General Assembly. This Resolution defines 17 Sustainable Development Goals as well as 169 targets and can be considered the final integration of ecological, economic and social Sustainable Development objectives, supported by a separately established financing framework, the Addis Ababa Action Agenda, as well as a transparent and inclusive reporting system to observe progress as to the achievement of its goals and targets.

elni Review puts the spotlight on the current state of play as regards legal arrangements and implementation in respect to some of the Resolution’s major objectives. Among these is the target to, “by 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world”. Measured by this benchmark, and having in mind that 2015 was the “International Year of Soils”, researchers from the *Ecologic Institut* (Berlin) analyse the national and international implementation of the “land degradation neutral world” target.

The impact of water quality, as well as quantity of quality water, on Sustainability Development is inter

alia reflected in Goals 6 and 14 of the Agenda 2030. In addition, according to certain EU Water Framework Directive objectives, European waters have to achieve “good ecological and chemical status” by 2015. Against this background, experts from the *EU Network for Implementation and Enforcement of Environmental Law (IMPEL)* assess perspectives and actions to improve water quality in Europe.

Another sustainable development hotspot is the climate, which is addressed inter alia in the Resolution’s 13th Goal. Amongst the most prominent instruments to combat climate change are emissions trading systems (ETS). *Jonathan Verschuuren* and *Floor Fleurke* examine the enforcement of the EU ETS in the Member States.

Furthermore, *Anaïs Berthier* questions access to the transposition of EU environmental law by Member States by analysing a ruling of the EU General Court in case C-612/13P (*ClientEarth v Commission*).

This issue’s *Recent developments* section provides an update on the TTIP-related ISDS discussions, a conference report on how the perception of chances and risks affect innovations for sustainability as well as a statement on environmental impact assessment law in Turkey.

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October 2015

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Enforcement of the EU ETS in the Member States

Jonathan Verschuuren and Floor Fleurke

1 Introduction

Although the EU ETS has been operating in three trading periods for ten years and has been extensively covered by legal research,¹ there has been remarkably little attention given to the enforcement of the ETS. Although, generally, we have seen an increasing centralization of the EU ETS, monitoring and enforcement are still largely in the hands of the emissions authorities in the states in which the EU ETS operates: 28 EU Member States plus Norway, Liechtenstein and Iceland. This article reports on the main findings of an ex-post evaluation of the legal implementation of the EU ETS at Member State level with a focus on compliance.² Our central research question was: Has the effectiveness of the compliance mechanism of the EU ETS improved in the third period (2013-2020)? What further improvements (if any) are necessary? To answer this question, we have described the relevant EU law in each of the three periods, reviewed previous evaluations and relevant research projects, and evaluated the implementation of the EU ETS in selected Member States, both through existing sources and through interviews with key players in the compliance mechanism at Member State level. The Member States that we studied for the latter part of the project were Germany, the Netherlands, Hungary, Greece, Poland and the UK.

2 Complying with the EU ETS: theory and existing knowledge

The EU ETS is the largest trading program in the world designed to combat global climate change.³ The theory behind emissions trading is that a market mechanism is established in order to mitigate greenhouse gases. After a cap is set and potential polluting firms have obtained allowances to emit, they can either (1) reduce their emissions and sell their allowances by, for example, investing in technological innovation; (2) use their allowances in order to cover their

emissions; or, (3) increase their emissions by buying additional allowances on the market.

The crucial importance of a well-developed and operationalized compliance chain was neglected in the original design. In fact, a striking paradox of the EU ETS is that while the idea is that greenhouse gas (hereafter: GHG) emissions should be regulated via the market, the system only functions if it operates in a well-regulated context.⁴ Market participants must have confidence that the system is transparent and consistent, and that it guarantees a level playing field for all actors in the 31 participating states. In this regard, information on emission allowances, on the amount of allowances that are surrendered, and information on actual emissions is essential. Monitoring, reporting and verification of this process are therefore of vital importance for effective enforcement. Compliance in this sense means monitoring the operation of the installations covered to ensure that they operate in accordance with the requirements of the EU ETS in order to determine whether further inspection or enforcement is necessary to ensure compliance.⁵

The EU ETS legislation originally left a considerable amount of discretion to Member States. In particular, this included operational elements of emission trading, such as registration, monitoring, verification, reporting and enforcement issues. Only after European law enforcement agencies signalled that in some European countries carbon trading fraudsters may have accounted for up to 90% of all market activity, with criminals pocketing billions, did the compliance issue receive increased attention. Moreover, different strategies for ensuring compliance among Member States give rise to distortions of the market for greenhouse gas allowances. The effectiveness and reliability of the ETS, therefore, depends to a significant extent on the effort of each of the Member States. Lack of compliance of only a few or even a single Member State can harm the functioning of the ETS within the entire EU. The Commission already emphasised the importance of oversight and enforcement in its Green Paper on emissions trading in the year 2000, by stating that: “*The purpose of strict compliance provisions and enforcement is to enhance confidence in the trading system, make it work in an efficient way in accordance with*

1 Among many others, see especially the comprehensive and up-to-date work of S. Bogojevic, *Emissions Trading Schemes: Markets, States and Law* (2013), S.E. Weishaar, *Emissions Trading Design: A Critical Overview* (2014).

2 This article summarizes the main findings of a research project that received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement No 308481. The full report J. Verschuuren and F. Fleurke, *Report on the legal implementation of the EU ETS at Member State level* (2014) is available through <http://entracte-project.eu/research/report-legal-studies/>.

3 Established by Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC, OJ L 275/32, 25.10.2003.

4 M. Peeters, *Inspection and market-based regulation through emission trading: the striking reliance on self-monitoring, self-reporting and verification*, 2 *Utrecht Law Review* 177-195 (2006).

5 IMPEL, *Options and Proposals for Consistency in the Implementation of the EU Emissions Trading Scheme Report 4: Good Practice in Compliance and Enforcement* (2007).

the rules of the internal market and at the same time increase the likelihood of achieving the desired environmental result."⁶ In reality, not much attention was dedicated to this important aspect in the initial set-up of the EU ETS.⁷

3 The compliance cycle of the EU ETS

The compliance cycle revolves around three key legal obligations: the GHG emissions permit, the MRV system and the Register. Let's briefly look at these key legal obligations of the participating operators in the EU ETS first.

The essence of the EU ETS is that every installation falling within the scope of the system surrenders an amount of emission allowances that is equal to the amount of emissions emitted during a year. This entails obligations for the operators covered, who need to be identified first. Since CO₂ may no longer be emitted by operators without a *GHG emissions permit*, this permit can be considered as the core legal instrument in Directive 2003/87. The competent authority can only issue a permit if it is satisfied that the operator is capable of monitoring and reporting emissions.⁸ In the permit, the specific activities of the installation(s) are described, as well as the main conditions for operating within the EU ETS. The permit must include the core obligation for the operator to surrender allowances equal to the total emissions of the installation in each calendar year, within four months following the end of that year.⁹ In addition, the operator is required to inform the competent authority of any changes planned in the nature or functioning, or an extension, of the installation that might require updating of the emission permit.¹⁰ Of paramount importance is the monitoring plan, without which the permit cannot be granted.¹¹ The EU provides for an extensive harmonized regulatory framework for the monitoring, reporting and the verification (MRV) to be implemented by the Member States.

The Directive requires that the GHG emissions permit contains a *monitoring plan* that fulfils the requirements under Commission Regulation 601/2012/EU on the monitoring and reporting of greenhouse gas emissions.¹² The competent authorities must ensure that each operator of an installation reports the emissions from that installation during each calendar year after the end of that year. Monitoring provisions require the

use of certain monitoring methodologies and detailed specific sector rules. Operators must take account of different aspects, such as the location of the measurement equipment, calibration and measurement, quality assurance and control, missing data and uncertainties. The principle of constant improvement of performance in monitoring and reporting emissions should encourage new improved approaches to be continuously found and this process should be supported by the verifier.

One of the monitoring requirements, according to Article 6(2)(d) and 14(3) of the Directive, entails the duty of the operator to draft and submit an *emission report*.¹³ The emission reports have to be verified by an independent and certified verifier.¹⁴ The verifier has to carry out the verification with the aim of providing a *verification report* that concludes with "*reasonable assurance*" that "*the operator's [...] report is free from material misstatements.*"¹⁵ This should guarantee the quality and reliability of the self-monitoring and self-reporting system that relates to very complex and technical matters. The verifier who is commissioned by the operator must carry out its activities with "*an attitude of professional scepticism recognising that circumstances may exist that cause the information in the operator's [...] report to contain material misstatements*". There are detailed rules regarding how verification should be conducted. For example, detailed testing of the data, including tracing the data back to the primary data source, cross-checking data with external data sources should be performed.¹⁶ During the verification process, the verifier must also conduct a site visit in order to assess the operation of measuring devices and monitoring systems and to conduct interviews.¹⁷ Although it is very important that the verification tasks are carried out 'in the public interest', Member State authorities remain ultimately responsible for checking compliance.

All transactions must be electronically submitted in a *Register* in order to ensure accurate data on transfers and submission or cancellation of emissions. In this way, transaction logs are crucial for the functioning of a trading system such as the ETS. If the integrity of the Register is harmed, it can lead to substantial fraud and cybercrime, including the double counting of

6 European Commission, Green Paper on greenhouse gas emissions trading, 8 March 2000, COM (2000) 87, 24.

7 Peeters was an early signaller of this important issue, *supra* note 4.

8 Directive 2003/87, Art. 6(1).

9 Directive 2003/87, Art. 6(2)(e).

10 Directive 2003/87, Art. 7.

11 Directive 2003/87, Art. 6(2)(c) and Commission Regulation 601/2012/EU mentioned in the next para.

12 Directive 2003/87, Art. 6(2)(c) and Commission Regulation 601/2012/EU of 21 June 2012 on the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council, OJ L 181/30, 12.07.2012.

13 See also Directive 2009/29/EC of 23 April 2009 of the European Parliament and of the Council amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme of the Community, OJ L 140/63, 05.06.2009, Art. 14 and 15, as well as Commission Regulation 600/2012/EU of 21 June 2012 on the verification of greenhouse gas emission reports and tonne-kilometre reports and the accreditation of verifiers pursuant to Directive 2003/87/EC of the European Parliament and of the Council, OJ L 181/1, 12.07.2012.

14 Directive 2003/87, Art 15 and Regulation 600/2012/EU.

15 Regulation 600/2012/EU, Art. 7.

16 Regulation 600/2012/EU, Art. 16.

17 *Ibid.*, Art. 21.

surrendered allowances or identity theft.¹⁸ To ensure this integrity, an EU-wide registry (European Union Transaction Log and Union Registry) replaced the national registries during the third period (2013-2020) of the EU ETS.¹⁹

Although the rules on compliance and enforcement have now been harmonized to a certain extent, individual Member States have an indispensable role to play in ensuring the effectiveness of the ETS. The active role of Member States in setting up compliance strategies is also important for ensuring that competition of the industry covered is not seriously distorted, and that there remains a ‘level playing field’.²⁰ ETS compliance issues drastically differ from standard command and control regulation. As Peeters pointed out, the classical way of enforcement in the case of command and control comes in the form of static obligations for firms, like binding limit values for their emissions, or the obligatory application of specific techniques.²¹ These obligations for firms covered do not change unless the permit is amended. In emissions trading, however, the obligations in the emission permit are dynamic: the amount of allowances that need to be surrendered fluctuates depending on the exact amount of gases emitted. This is a challenging and highly complex task to be borne by the operators of covered installations and continuous control and oversight of this task by Member State authorities is inevitable. In this regard, Weishaar even suggests that the ETS “*necessitates a system that may, perhaps, be even more stringent than in the case under comparable command and control instruments*”.²²

When thinking of compliance and inspection as an ongoing effort involving both operators and competent authorities, it should be borne in mind the complete *compliance cycle* from compliance assessment through undertaking site visits, compliance assistance by communication and persuasion and ultimately sanctioning. The carrying out of this compliance cycle includes the following activities:

- information and communication facilities,
- site visits and consideration of the results,
- monitoring achievements,

- verification of self-monitoring and self-reporting,
- checking equipment,
- checking systems and procedures,
- checking the relevant records and measurement systems,
- checking the emission permit to ensure that the activities described in the monitoring plan reflect the reality of the site in relation to the consistency and completeness of the monitoring of the emissions,
- checking the verified emissions report.²³

Ideally, a compliance assessment by the competent authority will be made based upon a risk assessment, taking into account the complexity of the installation, the level of emissions, the history of the installation and its operator, the time required for visits and the verifier report. ‘Instrument sequencing’, whereby enforcement agencies have a number of instruments at their disposal ranging from soft to hard, is also of relevance in this context. Regulators that are in a long-term relationship with regulatees – as in particular is the case within the dynamic context of the EU ETS – will want to foster good relationships that are conducive to sustained and long-term compliance. Therefore, upon becoming aware of an infringement, they will first seek to educate and persuade rather than resort to the more extreme coercive measures that are also at their disposal. In fact, it is the coercive powers that enforcement agencies can yield which account for the effectiveness of less draconic enforcement policies.

As is evident from the country studies in our report, the extent to which these compliance assessments are undertaken depends on the regulatory approach chosen by the competent authorities. This approach in itself depends on factors such as regulatory tradition, the principles underlying the enforcement strategy, the form of implementation, but also on the available resources. Compliance systems differ among Member States and not all Member States will use the same instruments. Against this background, an EU ETS Compliance Forum has been brought to life.²⁴ The purpose of this Forum, in which all Member States can participate on a voluntary basis, is to exchange information, best practices and difficulties concerning the operation of the EU ETS. Specific task forces are organized when priorities are placed on the agenda. Another instrument to foster harmonization is the use of standardized IT systems, which particularly in the case of such a complex and highly technical matter as emission trading, could prove to be effective.

¹⁸ See, for example, on the fraud hitting the EU ETS: Interpol, Guide to Carbon Crime, June 2013.

¹⁹ Commission Regulation 920/2010 of 7 October 2010 for a standardised and secured system of registries pursuant to Directive 2003/87/EC of the European Parliament and of the Council and Decision 280/2004/EC of the European Parliament and of the Council, OJ L 270/1, 14.10.2010; Commission Regulation 389/2013/EU of 2 May 2013 establishing a Union Registry pursuant to Directive 2003/87/EC of the European Parliament and of the Council, Decisions 280/2004/EC and 406/2009/EC of the European Parliament and of the Council and repealing Commission Regulations 920/2010/EU and 1193/2011/EU, OJ L 122/1, 03.05.2013. For a much more detailed description of the various amendments to the EU ETS, see the full report, *supra* note 2.

²⁰ Peeters, *supra* note 4 at 179.

²¹ *Ibid.* at 178.

²² S.E. Weishaar, Emissions Trading Design: A Critical Overview (Cheltenham: Edward Elgar, 2014), 150.

²³ See also IMPEL, *supra* note 5.

²⁴ For information on the Forum, see documents released in 2014 for the 5th EU ETS Compliance Conference through http://ec.europa.eu/clima/events/articles/0100_en.htm.

The EU ETS Directive requires Member States to put in place a system of *penalties* which is effective, proportionate and dissuasive, but the nature of the penalties is largely left to Member State discretion.²⁵ There is, however, an important exception to this rule. Each year by 30 April the latest, the operator of an installation has to surrender a number of allowances equal to the total emissions from that installation during the preceding calendar year.²⁶ Article 16(3) requires that failure to comply with that obligation will result in a mandatory penalty of 100 EUR per tonne of excess CO₂ emissions, in addition to the publication of the name of the offending operators.²⁷ The penalty of ‘naming and shaming’ is a novelty in European secondary environmental legislation. The idea is that the installations covered are usually conscious of their reputation and therefore this penalty would increase compliance.²⁸ In addition to the excess emissions penalty, the operator is still obliged to surrender an amount of allowances equal to the excess emissions.²⁹ Initially, in its *Billerud* judgment, the CJEU denied a role for the principle of proportionality even in the case that the operator had a sufficient number of emission allowances on 30 April, but, as a result of an oversight, an administrative error or a technical problem, did not surrender them on time.³⁰

In a more recent preliminary ruling however, the CJEU limited the scope of Article 16(3) concerning proceedings between the Federal Republic of Germany (represented by the German Emissions Trading Authority) and Nordzucker AG, a sugar refining company, concerning a penalty for infringement of its obligation to surrender sufficient greenhouse gas emission allowances to cover its emissions during the preceding year.³¹ The Court ruled that Article 16(3) of the EU ETS Directive did not apply to an operator who had surrendered a number of greenhouse gas emission allowances equal to the emissions for the preceding year as reported *and* verified, even if it was established by an additional control carried out by the competent national authority after the expiry of the time-limit for surrender, that those emissions were understated, so that the number of allowances surrendered was insufficient.³²

The Court observed that the structure of article 16 of EU ETS Directive included two different systems of

penalties, provided for in article 16 (1) and (3).³³ Under article 16(1), it is for the Member States to determine the penalties which could be imposed on an operator who, although fulfilling the obligation to surrender for the purposes of Directive failed in addition to respect other requirements inherent in the functioning of the greenhouse gas emission allowance trading scheme. The Court therefore stated that fact that the penalty provided for in article 16(3) was not applicable did not mean that an operator who produced an incorrect emissions report was able to escape penalty if the verifier failed to discover the irregularities committed.³⁴ However, the automatic application of the lump-sum penalty provided for in Article 16(3) of the Directive was deemed disproportionate since acting in good faith, an operator cannot foresee the result of such additional monitoring with sufficient certainty.³⁵

Indeed, for all other breaches of the rules on MRV, or other obligations concerning the functioning of the ETS, Member States have to put in place a system of penalties that is effective, proportionate and dissuasive.³⁶ For instance, when monitoring and reporting obligations are not followed and as a result essential data is missing or not accurate. If this is the case, it will not be clear how many allowances must be surrendered in reality. This could obviously seriously impair the effectiveness of the ETS and Member States thus have an obligation to establish an enforcement strategy that includes sanctions for these infringements. Considering the diversity in enforcement strategies among the Member States, Article 21 of the Directive is of specific interest. According to this provision, Member States are required to report every year on the application of the Directive. The Commission has developed a format for this questionnaire that also pays attention to compliance issues like those discussed above.³⁷ This format has been improved as of 2013. Reports now have to include much more specific information on all issues relating the functioning of the EU ETS. On the basis of these reports the Commission has to publish a report on the application of the Directive within three months of receiving the reports of the Member States.³⁸ In the past, the Com-

25 Directive 2003/87, Art. 16(1).

26 Directive 2003/87, Art. 12(3).

27 Directive 2003/87, Art. 16(2).

28 Often seen as an element of ‘smart regulation’, see extensively N. Gunningham and P. Grabosky, *Smart Regulation. Designing Environmental Policy* (1998).

29 Directive 2003/87, Art. 16(3).

30 Case C-203/12, *Billerud Karlsborg AB and Billerud Skärblacka AB v Naturvårdsverket*, ECLI:EU:C:2013:664.

31 Case C-148/14, *Bundesrepublik Deutschland v Nordzucker AG*, ECLI:EU:C:2015:287.

32 *Ibid.*, para 38.

33 *Ibid.*, para. 39-43.

34 *Ibid.*, para. 40.

35 *Ibid.*, para 43.

36 Directive 2003/87, Art. 16(1).

37 Commission Decision of 23 November 2006 amending Decision 2005/381/EC establishing a questionnaire for reporting on the application of Directive 2003/87/EC of the European Parliament and of the Council establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC, OJ L 326/38, 25.11.2006. The Art. 21 reports are available through <http://cdr.eionet.europa.eu/>.

38 Directive 2003/87/EC, Art. 21(3). See for example EEA, *Application of the Emissions Trading Directive by EU Member States — reporting year 2008*, available through http://www.eea.europa.eu/publications/technical_report_2008_13.

mission has used the ‘Article 21 Reports’ for improvements in future trading periods.

4 Findings of empirical research in six EU Member States

4.1 *Helping operators to comply*

Compliance with the EU ETS is very high.³⁹ Most infringements are caused by ‘genuine mistakes’ and lack of knowledge, not by deliberate actions to evade obligations. The majority of offences concern the operation of an installation without holding the required permit, exceeding the deadline for submitting the emission report or not monitoring in accordance with the monitoring plan. It is also believed that the verification process pays off: many mistakes are discovered during that process and subsequently rectified. Since prices of allowances have been very low, the majority of allowances are surrendered and not traded. Hence, the EU ETS has not been tested to the full yet, and it remains to be seen whether compliance will be as high in a market under stress (with high prices due to limited availability of allowances).

Since most infringements are caused by ignorance or misunderstandings, usually related to the complexity of the rules, it is important that competent authorities offer compliance assistance throughout the whole compliance cycle. Currently, there are profound differences among countries in this respect: some have an active helpdesk, regular mailings and meetings. Other countries hardly have any assistance. In the Netherlands, the Dutch Emissions Authority (NEa) has developed an inspection strategy that is published on its website.⁴⁰ It states that all new entrants operating in the EU ETS shall be audited within three years to test their monitoring plan. The frequency of audits of other operations depends on a risk-based assessment, taking into account the location and complexity of the operation, the size of emissions, past compliance behaviour and external signals. In addition, the NEa conducts random audits. The audits are generally announced and the NEa provides a ‘what-to-expect’ list to help operators prepare for the audit. This exemplifies the strategy of persuasion of the NEa: throughout the entire compliance cycle the NEa deliberately communicates and assists operators in their efforts to comply with the EU ETS. The NEa also has a very active helpdesk to ensure its ‘Compliance Assistance’ strategy. 98% of all questions are answered within 1.5 days. In addition, much effort is afforded to different forms of information dissemination: the NEa website

is very transparent and accessible, there is a newsletter, information gatherings for ETS participants are organized, and a yearly NEa day is organized. Similarly, in Germany, much effort is put into assisting companies to comply with the ETS. The German Emissions Trading Authority (DEHSt) has a busy helpdesk, regular mailings, they organize conferences etc., all aimed at helping installations to comply. Questions received at the helpdesk regularly lead to follow-up actions by the DEHSt.

In Greece, Hungary and Poland, we found far fewer collaborative processes between operators and the authorities. The operators in these countries seem to be much more on their own in terms of figuring out how to comply with the requirements on monitoring and reporting. We also found that *ex post* control is a much less continuous process. Instead, the authorities in these countries primarily rely on the verified report. In Greece, the authorities complained that most of the operators send the verified report to them on the final day. This is problematic because then they have to check everything within a very short period of time.

4.2 *Reliance on verified emissions reports*

The two tier system, whereby a first check is performed by independent verifiers hired by operators and a second check is conducted by competent authorities on the verified emissions report, works well. Verifiers detect most of the anomalies and take the necessary follow up actions. Emissions authorities have to be notified of these, so as to include these data in the operator’s compliance file. It should be noted, though, that a lack of certified verifiers constitutes a problem in some countries (e.g. Poland). As a result of this, some operators were unable to submit their annual report in a timely manner.

There are important differences in the organization and style of inspection and enforcement among the Member States that were researched. Some countries depend largely on the verification process; others have developed their own inspection policy. The German DEHSt does not review the work of the verifiers but instead performs additional checks. They, for instance, compare different years and different source streams. So far, two methods have been used in Germany to detect non-compliance. First and foremost, automated systems of the competent authority detect suspicious data automatically, such as large differences compared to previous years. It will then investigate these signals in-depth. Second, inspectors who compare data from various sources and do cross checks may detect irregularities. The authorities expect that the newly planned site visits will further improve detection of non-compliance (see below). Upon detection of non-compliance, the DEHSt corrects the report if necessary and the operator must pay a financial penalty that follows from the corrected data.

³⁹ The same conclusion was reached by A. Dechezleprêtre, Report on the Empirical Assessment of Monitoring and Enforcement of EU ETS Regulation (2013), available through <http://entracte-project.eu/research/report-monitoring-and-enforcement-eu-ets-regulation/>.

⁴⁰ Document available at <http://www.emissionsauthority.nl/toezicht/handhaving/sanctiestrategie/sanctiestrategie-van-de-nea>.

In the Netherlands, the NEa does not review every emission report but rather only a random sample. If the NEa detects inaccuracies it will substitute the report by conducting its own measurements. There have been incidences where the NEa found omissions in the verified reports, and subsequently sent a complaint to the verifier and the Council for Accreditation. In Greece the competent authority also randomly checks a sample of the reports. The Hungarian reports pursuant to Article 21 of the Directive for the period of 2008-2012 stated that all verified reports were checked for completeness and that most were reviewed in full detail, with the conclusion that no non-satisfactory reports were received. However, although Hungary has implemented inspection and enforcement obligations in its national legislation, the situation is quite different in practice. Companies falling under the scope of the Directive are not checked ex-ante and do not receive assistance. There exists ex-post control of the monitoring protocol, but only electronically. The competent authority does not perform individual checks and site-visits. During the first trading period, a priority system for regular checks was developed but it was never put in operational use.

4.3 Site visits

Site visits are not yet part of the standard enforcement strategy of most Member States that we studied. Only the UK and the Netherlands have a well-developed blueprint for conducting regular site visits on the basis of a risk assessment. There is a considerable risk that non-compliant behaviour will remain undetected when inspectors rely on data provided by the automated system ('paper work').

In the UK, the competent authority regularly conducts site visits as part of its enforcement strategy; 5% of the operators are audited each year. Operators receive notice of these audits since their purpose is more to check than to inspect, although the regulator could formally use its power of entry to perform an unannounced inspection. Regulators in England and Wales have developed a common format for reporting the results of site visits, which are entered into an electronic database. The details include a summary of the visit, any instances of non-compliance detected follow-up actions that have been agreed with the operator. The findings of the site visit may also be shared with other government bodies. Non-compliance is explicitly recorded to create a database of historical performance for future reference. Follow-up varies from a phone call or a visit to slightly more invasive forms such as a warning. By comparison, inspection in Germany was mainly an administrative process as described above until 2013. Until recently, the federal emissions authorities performed physical inspections of installations rather than the DEHSt itself. However, the emissions authorities did not focus on GHG emis-

sions. In retrospect, this was the biggest loophole in the German EU ETS compliance mechanism.

4.4 Enforcement competences and capacity

In some Member States (e.g. UK, the Netherlands, Hungary), all competences regarding the functioning of the ETS (issuing of permits, inspection and sanctioning) are bundled in one agency. In other Member States competences are divided among different authorities. In general, it is considered wise to have separate authorities for the issuing of permits and for inspection and enforcement. This seems to be different for the EU ETS. Given the complexity of the EU ETS and the emphasis on compliance assistance, the emissions authority seems to be best placed overseeing the whole process, from the issuing of the GHG emissions permit to possible sanctioning of non-compliance. However, cooperation with regular environmental inspection authorities is to be recommended (e.g. joint site inspections) since general environmental law inspectors will already have established relationships with operators. Knowing the operator's past (compliance) performance in other environmental areas can be useful when checking compliance with the EU ETS.

In addition, there are notable variations in capacity and staff employed at the competent authorities. The number of staff employed in the national emissions authorities differs enormously, ranging from 4 to 5 in Greece and Hungary to 150 in Germany (40-50 of whom are responsible for inspecting compliance by installations, i.e. checking emission reports, monitoring reports, etc.).

4.5 Sanctions

Although the automatic sanction of € 100 EUR per tonne CO₂ equivalent emitted by an installation for which the operator did not surrender allowances is harmonized, there are major differences in the other administrative and criminal sanctions that can be imposed in case of evasion of rules, fraud, etc. These additional penalties in some Member States include huge fines (in the range of millions of euros) and substantial terms of imprisonment (up to ten years of jail time), and in others rather low fines (as low as €1,500, and no possibility to impose criminal charges). The UK has recently amended the 'excess allowances' sanction; if operators underreport and self-rectify, the penalty of € 100 EUR per tonne CO₂ can be reduced to a €20 penalty.⁴¹

It is remarkable that the sanction of 'naming and shaming' is not actively applied in all Member States researched. The names of the installations that did not surrender sufficient allowances can be found in reports on the website of the emissions authority, but are

⁴¹ Subject to the qualification of acting in good faith, this practice can now be considered to be in line with Case C-148/14, note 30 above.

far from easy to find. In the Netherlands and in Poland the names of the offending operators are published in its Journal of State. The sanction, therefore, seems to have lost some of its intended effect of reputation loss. According to the German competent authority DEHSt, NGOs have not followed up on this information (so far). NGOs identify the dirtiest power companies from the reports, but are more concerned with the level of emissions than with compliance issues. As a consequence, it can be doubted whether the public will have learned of the publication of the installation names.

4.6 Cooperation among Member States

The EU ETS Compliance Forum is regarded as highly valuable. Information and best practices are exchanged, frequently asked questions discussed and ideas are tested among peers. In addition, specific task forces on current issues are set up, one of which is devoted to monitoring and reporting. Germany and the Netherlands seem to be the main drivers of the forum. DEHSt regrets that this is only a voluntary forum. There are only a handful of active members: the Netherlands, Germany and the UK, and to some extent Italy. With 28 Member States, this is a disappointingly low number of active states and is possibly harmful to the level playing field that is needed throughout the EU to ensure an efficient and effective EU ETS.

We also found that the information provided by the Member States in the reports pursuant to Article 21 of the Directive do not give a complete picture regarding actual compliance and enforcement of the EU ETS in the Member States. The new 2013 format for reporting will hopefully repair this situation (e.g. it is no longer sufficient to state that checks were carried out on verified emission reports; it now needs to be specified what these checks entail).

5 Conclusion

Contrary to general belief, it is clear that monitoring and enforcement efforts of an emissions trading market mechanism must be much more intensive than in the case of regular command and control type instruments.⁴² The EU had to adopt literally dozens of rules and regulations of various legal forms to secure a reliable compliance mechanism of the EU ETS. The entire compliance cycle of monitoring, reporting, verification and sanctioning is essential for the success of the ETS, but inherently very complex due to fluctuations of emissions and allowances. The regulatory framework for compliance has improved considerably since trading commenced in 2005. This is mostly attributed to tightened rules at EU level and, generally, the centralization of the EU ETS. In particular, the harmonization of the rules for verifiers by Regulation 600/2012/EU marked a necessary improvement. The

various measures to combat VAT fraud, money-laundering and other criminal activities that were discovered in 2009 have improved the resilience of the EU ETS in responding to such criminal activities, even though it should be acknowledged that these past criminal activities did not target the allowances as such. Similar improvements stem from linking the EU ETS to the EU's financial regulatory instruments (Market Abuse Regulation, Markets in Financial Instruments Directive and Anti-Money Laundering Directive),⁴³ tightened rules on transactions, the range of available sanctions, centralizing auctioning and registration processes, etc.

Centralization and harmonization did not encompass the entire compliance cycle: national competent authorities have remained responsible for inspection and sanctioning, and are in charge of checking the compliance of the MRV process. Therefore, achieving full compliance with the EU ETS still largely depends on the efforts of national competent authorities of EU Member States, Iceland, Norway and Liechtenstein.

We found many differences among the EU Member States and clearly Member States can learn a lot from each other's attempts to close loopholes and fix weak spots in the compliance mechanism. Overall, more efforts should be undertaken to harmonize the *practice* of the national competent authorities responsible for the enforcement of the EU ETS. This is not easily achieved. The case studies clearly show that compliance assistance is regarded as the most important element of the compliance cycle of the EU ETS. Such compliance assistance is best offered at the national level in the national context. In addition, it could be argued that the EU, with its extensive legislative framework for the EU ETS that has been developed over the years, has exhausted its legislative powers in this field. Therefore, other forms of harmonization (e.g., network-based peer review, which is practice among such Member States as Germany and the Netherlands) need to be further explored.

42 As already predicted in 2006 by Peeters, *supra* note 4 at 193.

43 Regulation 596/2014, OJ L 173/1, Directive 2014/65/EU, OJ L 173/349, and Directive 2005/60/EC, OJ L 309/15 respectively.

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The Editors would like to thank **Vanessa Cook** (Öko-Institut) for proofreading the *elni Review*.

We invite authors to submit manuscripts to the Editors as files by email using an IBM-compatible word processing system.

The *elni Review* is the double-blind peer reviewed journal of the Environmental Law Network International. It is distributed once or twice a year at the following prices: commercial users (consultants, law firms, government administrations): €52; private users, students, libraries: €30. Non-members can order single issues at a fee of €20 incl. packaging. The Environmental Law Network International also welcomes an exchange of articles as a way of payment.

The *elni Review* is published with financial and organisational support from Öko-Institut e.V., and the Universities of Applied Sciences in Darmstadt and Bingen.

The views expressed in the articles are those of the authors and do not necessarily reflect those of elni

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In many countries lawyers are working on aspects of environmental law, often as part of environmental initiatives and organisations or as legislators. However, they generally have limited contact with other lawyers abroad, in spite of the fact that such contact and communication is vital for the successful and effective implementation of environmental law.

Therefore, a group of lawyers from various countries decided to initiate the Environmental Law Network International (elni) in 1990 to promote international communication and cooperation worldwide. elni is a registered non-profit association under German Law.

elni coordinates a number of different activities in order to facilitate the communication and connections of those interested in environmental law around the world.

Coordinating Bureau

Three organisations currently share the organisational work of the network: Öko-Institut, IESAR at the University of Applied Sciences in Bingen and sofia, the Society for Institutional Analysis, located at the University of Darmstadt. The person of contact is Prof. Dr. Roller at IESAR, Bingen.

elni Review

The elni Review is a bi-annual, English language law review. It publishes articles on environmental law, focusing on European and international environmental law as well as recent developments in the EU Member States. elni encourages its members to submit articles to the elni Review in order to support and further the exchange and sharing of experiences with other members.

The first issue of the elni Review was published in 2001. It replaced the elni Newsletter, which was released in 1995 for the first time.

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